

United States District Court
District of Massachusetts

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Mizuho Orthopedic Systems, Inc.,)	
)	
Plaintiff,)	
)	
v.)	
)	Civil Action No.
Allen Medical Systems, Inc., et al.,)	21-10979-NMG
)	
Defendants.)	
)	

MEMORANDUM & ORDER

Gorton, J.

This action concerns alleged infringement of two United States patents held by plaintiff Mizuho Orthopedic Systems, Inc. ("Mizuho" or "plaintiff"). The patents, United States patents number 10,888,481 ("the `481 Patent") and 9,713,562 ("the `562 Patent") together, "the Asserted Patents", each disclose an adjustable support apparatus for a specialty surgery table. Mizuho contends that defendants, Allen Medical Systems, Inc. ("Allen") and Hill-Rom, Inc. ("Hill-Rom") together, "defendants", sell infringing surgery tables.

Pending before the Court is the motion of defendants to dismiss Mizuho's claim for infringement of the `562 Patent (Docket No. 28). For the reasons which follow, that motion will be denied.

I. Background

Mizuho and the defendants are both in the business of designing and selling specialty surgery tables. Mizuho is incorporated in Delaware and has its principal place of business in California. Allen is incorporated in Indiana and has its principal place of business in Massachusetts. Hill-Rom, the parent company of Allen, is incorporated in Indiana and has its principal place of business in Illinois.

Mizuho is the holder of the Asserted Patents. It sells a commercial embodiment of those patents, the Trios table. Defendants also sell specialty tables, including the Allen Advance Table ("the Advance Table"), and a product identified as the Advance Table Pinless H-Bracket ("the Pinless H-Bracket" and, together with the Advance Table, "the Accused Products") for use with the Advance Table.

In June, 2021, Mizuho filed a complaint alleging that defendants, by selling the Accused Products, infringed the `481 Patent, either literally or under the doctrine of equivalents, and induced others to infringe the patent. About two months later, Mizuho filed an amended complaint which added a count for infringement of the `562 Patent. A second amended complaint, filed in September, 2021, alleges substantially the same two counts.

Shortly thereafter, defendants moved to dismiss the amended complaint insofar as it alleges infringement of the `562 Patent, contending that 1) the Accused Products do not literally infringe the patent and 2) the prosecution history of the `562 Patent estops Mizuho from asserting infringement under the doctrine of equivalents.

II. Motion to Dismiss

A. Legal Standard

To survive a motion to dismiss pursuant to Fed. R. Civ. P. 12(b)(6), the complaint must contain sufficient factual matter to state a claim for relief that is actionable as a matter of law and "plausible on its face." Ashcroft v. Iqbal, 556 U.S. 662, 678 (2009) (quoting Bell Atl. Corp. v. Twombly, 550 U.S. 544, 570 (2007)). A claim is facially plausible if, after accepting as true all non-conclusory factual allegations, the court can draw the reasonable inference that the defendant is liable for the misconduct alleged. Ocasio-Hernandez v. Fortuno-Burset, 640 F.3d 1, 12 (1st Cir. 2011).

When rendering that determination, a court may not look beyond the facts alleged in the complaint, documents incorporated by reference therein and facts susceptible to judicial notice. Haley v. City of Boston, 657 F.3d 39, 46 (1st Cir. 2011). The prosecution history of the patent is amenable to consideration on a motion to dismiss. See Amgen Inc. v.

Coherus BioSciences, Inc., 931 F.3d 1154, 1156 (Fed. Cir. 2019); Jenny Yoo Collection, Inc. v. Watters Design Inc., No. 16-2205-VSB, 2017 U.S. Dist. LEXIS 175399 at *30 n.11 (S.D.N.Y. Oct. 20, 2017). A court also may not disregard properly pled factual allegations even if actual proof of those facts is improbable. Ocasio-Hernandez, 640 F.3d at 12. Rather, the relevant inquiry focuses on the reasonableness of the inference of liability that the plaintiff is asking the court to draw. Id. at 13.

B. The `562 Patent

The `562 Patent is directed to an adjustable support apparatus for a surgery table. The apparatus comprises a tower and a crossbar to which the tower connects. The crossbar has two openings, the first of which consists of a recess and an undercut hollow and the second of which consists of a recess and a spring loaded plunger. The tower, in turn, has two protuberances which engage the two openings of the crossbar in the following manner.

The first protuberance consists of a cylinder on the side of which there is a "boss", which is a sort of knob or protrusion. The first protuberance enters the first opening from above, with the tower at an angle to the crossbar, i.e. the tower and the crossbar occupy different vertical planes. Once the first protuberance has engaged the first opening, the tower is rotated into vertical alignment with the crossbar. This has

the effect of locking the first protuberance into place because, while the first opening is configured to allow the protuberance to enter from above, when the tower is rotated the boss travels through an undercut hollow in the crossbar, preventing the first protuberance from being released from the first opening. The parties describe this as a "bayonet-style" attachment.

When the tower is rotated, the second protuberance engages the second opening from the side. In the process, it displaces the spring loaded plunger, which comes to rest in a slot in the second protuberance, having the effect of locking the second protuberance in place. When the rotation of the tower is complete, the tower and the crossbar are secured together in vertical alignment.

C. Application

Prosecution history estoppel is an equitable doctrine which prevents a patentee from recapturing under the doctrine of equivalents subject matter surrendered during prosecution of the patent. Amgen, 931 F.3d at 1159. Whether prosecution history estoppel applies is a question of law determined through a three-step analysis. See Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 535 U.S. 722 (2001) ("Festo I"). At the first step, the inquiry is whether one or more amendments filed in the Patent and Trademark Office ("the PTO") have narrowed the literal scope of the claim. Festo Corp. v. Shoketsu Kinzoku

Kogyo Kabushiki Co., 344 F.3d 1359, 1366 (Fed. Cir. 2003) (“Festo II”) (citing Pioneer Magnetics, Inc. v. Micro Linear Corp., 330 F.3d 1352, 1356 (Fed. Cir. 2003)). If the amendment did not narrow the claim, the analysis ends and prosecution history estoppel does not apply. Id. at 1367.

If, however, the amendment was narrowing, the analysis proceeds to the second step, where the question is whether the amendment was a “substantial one relating to patentability”. Id. Where no reason for the narrowing amendment appears in the record, the amendment is presumptively substantial and related to patentability. Id. (citing Warner-Jenkinson Co. v. Hilton Davis Chemical Co., 520 U.S. 17, 33 (1997)). That presumption may be rebutted but only with evidence in the prosecution history record. Id.

If the amendment was made for a substantial reason relating to patentability, the analysis proceeds to the third and final step at which the Court must determine the scope of the subject matter surrendered by the narrowing amendment. Id. (citing Pioneer Magnetics, 330 F.3d at 1357). The patentee is presumed to have surrendered “all territory between the original claim limitation and the amended claim limitation”. Id. (citing Festo I, 535 U.S. at 740). To rebut that presumption, the patentee must demonstrate that 1) the alleged equivalent would have been unforeseeable at the time of the narrowing amendment, 2) the

rationale underlying the narrowing amendment “bore no more than a tangential relation” to the equivalent in question or 3) there was “some other reason” suggesting that the patentee could not reasonably have been expected to describe the alleged equivalent. Id. (citing Festo I, 535 U.S. at 740-41). Here, again, the available evidence is limited to the prosecution history. Id.; Phillips v. AWH Corp., 415 F.3d 1303, 1317 (Fed. Cir. 2005) (explaining that prosecution history record includes prior art cited during examination).

There is no “hard-and-fast test” for whether the rationale behind a narrowing amendment bears more than a tangential relation to an alleged equivalent. Intervet Inc. v. Merial Ltd., 617 F.3d 1282, 1291 (Fed. Cir. 2010). The Federal Circuit has, however, offered guidance. An amendment made to avoid prior art which contains the equivalent in question is not merely tangential to that equivalent; rather, the disavowal is central to the allowance of the claim. Id. (citing Pioneer Magnetics, 330 F.3d at 1357). If, on the other hand, the prior art encompasses only disparate devices which do not contain the alleged equivalent, a narrowing amendment is substantially more likely to bear only a tangential relation to the equivalent. See, e.g. Cordis Corp. v. Medtronic Ave, Inc., 336 F. Supp. 2d 363, 369 (D. Del. 2004). A narrowing amendment, in sum, should not be taken to relinquish equivalents which are “beyond a fair

interpretation of what was surrendered". Festo I, 535 U.S. at 737-38.

The parties do not dispute that the `562 Patent was amended several times during prosecution or that the amendments were narrowing. Defendants argue that Mizuho cannot rebut the Festo presumption and therefore is estopped from asserting infringement under the doctrine of equivalents with respect to three elements of the `562 Patent: 1) "boss", 2) "recess and undercut hollow" and 3) "spring loaded plunger". Mizuho rejoins, however, that the amendments were made for reasons only peripherally related to the equivalents in questions and submits that it is not estopped. The Court addresses the three elements seriatim.

1. Boss

The term "boss" was added to what would become Claim 1 of the `562 Patent after the examiner rejected Mizuho's application over prior art, specifically United States Patent Application Publication No. 2009/0229049 ("Heimbrock") which discloses side guard rails for use with hospital beds.¹ The examiner observed that Heimbrock taught two protuberances that engaged two channel-type openings and reasoned that the addition of a boss

¹ Mizuho is the assignee, not the applicant, of the `562 Patent but, for simplicity, the Court will refer to "Mizuho" in lieu of the applicant.

to the first protuberance, which Mizuho claimed in a now-obsolete Claim 9, would be obvious in light of Heimbrock which taught various protrusions on its second protuberance.

As a result, Mizuho canceled all pending claims and submitted new claims, including the "boss" limitation in essentially its present form. The new claim described the boss as

engaging a part of the first end support within said first opening [and explained that the tower would rotate] while boss is engaging a part of the first end support within said first opening[.]

In accompanying remarks, Mizuho explained that its claims "emphasize novel features" of its application, namely that the boss engages a part of the end support within the first opening and continues to do so upon rotation of the tower. It contended that the novel structure allowed for a "snap-in bayonet type of fitting" which was not shown by Heimbrock or elsewhere in the prior art.

The alleged boss equivalent in the Accused Products is a curved opening which is engaged by a protuberance, facilitating rotational locking. Defendants argue that Heimbrock's channel-type opening is structurally and functionally similar to the alleged equivalent and submit that Mizuho is therefore estopped from asserting infringement under the doctrine of equivalents. Mizuho rejoins that Heimbrock's opening is dissimilar because it

facilitates vertical movement of the guard rails while, by contrast, the boss equivalent in the Accused Products facilitates rotational movement.

The Court agrees with Mizuho. The channel-type opening in Heimbrock is dissimilar to the purportedly equivalent elements in the inventive and accused devices. See Cordis Corp., 336 F. Supp. 2d at 370; Exergen Corp. v. Kaz USA, Inc., No. 13-10628-RGS, 2015 U.S. Dist. LEXIS 117770 at *7 n.5 (D. Mass. Sept. 3, 2015). Generally speaking, the boss and the alleged equivalent in the Accused Products both facilitate rotational locking. Heimbrock's channel-type opening, a deep recess that controls vertical movement and does not permit rotation, is structurally and functionally distinct. See Bio-Rad Labs., Inc. v. 10x Genomics Inc., 967 F.3d 1353, 1366 (Fed. Cir. 2020).

Furthermore, the prosecution history reveals that the reason for the amendment was to distinguish the invention from those characteristics of Heimbrock rather than to surrender a rotational locking mechanism, an apparatus not present in the prior art nor fairly within the scope of any surrender made by the amendment. See Docket No. 30-3 at 7; Bio-Rad Labs, 967 F.3d at 1366 (declining to apply prosecution history estoppel where the prior art did not teach the use of the alleged equivalent).

Finally, in the interest of completeness the Court briefly addresses Mizuho's contention that the "boss" in Heimbrock is a

set of notches on one of its protuberances, not the channel-type opening. Those notches were referred to by the examiner as a "boss". Nevertheless the Court agrees with defendants that the relevant inquiry is not whether the alleged equivalent "boss" is similar to the element designated as a "boss" in the prior art but whether the alleged equivalent "boss" was disclosed in the prior art, no matter its nomenclature. Festo Corp., 344 F.3d at 1366. For the reasons previously discussed, it was not.

In sum, Mizuho is not estopped from alleging infringement under the doctrine of equivalents with respect to the "boss" element.

2. Recess and Undercut Hollow

The term "recess and undercut hollow" was added to the claims after Mizuho's second amended application was rejected as anticipated by United States Patent Application Publication 2003/02263176 ("Thompson") which discloses tilting hung windows having a "balancer" secured to the window panel. Despite rejecting Mizuho's application, the examiner noted that, taken in its entirety, it described an apparatus not found in the prior art and suggested that if Mizuho were to claim several additional structures, i.e. "a recess and an undercut hollow" and a "spring loaded plunger", the application would likely overcome the rejection.

Accordingly, Mizuho amended its application to include the suggested structures. In accompanying remarks Mizuho stated that, in light of the examiner's comments, it believed that the new claims delineated allowable subject matter, distinguishing the apparatus from the prior art.

As a preliminary matter, defendants contend that Mizuho cannot show that the reason for the amendment was merely tangential to the alleged equivalent because Mizuho failed to explain why the terms were added to the claims. That argument is unavailing. The reason for an amendment must be "objectively apparent" from the prosecution history record, Festo Corp., 344 F.3d at 1369, but that record includes more than just the statements of the applicant. Here, the examiner suggested that Mizuho add certain elements to distinguish its invention from the prior art, which Mizuho did. In light of that suggestion (to which Mizuho referred in the "Remarks" submitted with the amendment), the reason for the amendment is objectively apparent without the need for any further explanation. See id. at 1369-70 (explaining that "whether an amendment was merely tangential to an alleged equivalent necessarily requires focus on the context in which the amendment was made").

Turning to the term at issue, defendants aver that the alleged equivalent in the Accused Products is a channel-type opening without a recess and undercut hollow, akin to similar

elements disclosed by Heimbrock and Thompson. They submit that Mizuho's addition of "a recess and undercut hollow" was meant to distinguish the first opening in the '562 Patent from the openings disclosed by Heimbrock and Thompson and that Mizuho's claim of infringement under the doctrine of equivalents constitutes a prohibited attempt to recapture a surrendered equivalent.

The Court is underwhelmed. Despite defendants' protestations, the cited elements in Thompson and Heimbrock bear little relation to their purported equivalents in the inventive and accused devices. See Cordis Corp., 336 F. Supp. 2d at 369. Thompson contains a pin-and-groove apparatus which facilitates vertical movement. As previously discussed, the channel-type openings in Heimbrock also enable vertical movement and do not permit rotation. In contrast, the alleged equivalent recess and undercut hollow in the Accused Products is a curved opening that facilitates rotational locking. Consequently, defendants' argument that the alleged equivalent is the "same structure" as found in the prior art is tenuous.

Nor is the Court persuaded that the alleged equivalent is within the territory surrendered by amendment. The amendment at issue added two new limitations, including a "recess and undercut hollow", to define more accurately what it invented and, in so doing, to distinguish the claimed invention from non-

analogous prior art. Eli Lilly v. Hospira, Inc., 933 F.3d 1320, 1331 (Fed. Cir. 2019). The prior art, as discussed, did not contain structurally or functionally similar locking mechanisms. The Court concludes that the amendment, which was intended to introduce a recess and undercut hollow, did not cede other equivalent rotational locking mechanisms. Id. Mizuho is not precluded from arguing that the alleged equivalent is one such mechanism.

3. Spring Loaded Plunger

The term "spring loaded plunger" was also added to the claims in response to the rejection of the second amended application. Here, again, defendants contend that Mizuho is estopped from asserting infringement under the doctrine of equivalents because it failed to explain why the term was added to the claims, an argument which the Court has rejected. In the alternative, they argue that the reason for the amendment was to overcome the channel-type openings engaging with smooth cylindrical protuberances as disclosed by Heimbrock and Thompson. Defendants submit that because the Accused Products also include a channel-type opening without any spring loaded plunger, Mizuho is estopped from claiming infringement under the doctrine of equivalents.

That argument is unavailing. The alleged equivalent is a plunger, an element which is present both in the inventive and

accused devices but not in the prior art that the amendment distinguished. Defendants liken the Accused Products' plunger to the channel-type openings and cylindrical protuberances in Heimbrock and somewhat similar elements of Thompson but that analogy is illusory because those elements have little, if anything, in common with the structure or function of the plunger in the inventive or accused devices.

Rather, the prosecution history reveals that the reason for the amendment was to introduce a plunger to distinguish the inventive device from prior art devices which lacked one, not to distinguish the inventive device's plunger from those in the prior art. See, e.g. ADREA, LLC v. Barnes & Noble, Inc., No. 13-4137-JSR, 2014 U.S. Dist. LEXIS 154469 at *5-6 (S.D.N.Y. Oct. 13, 2014) (finding no estoppel where "the rationale behind the amendment was to introduce the concept of a lending period in the first place, not to specify the precise moment at which the lending period begins to run"). Consequently, the nature of the plunger was at most tangential to the reason for the amendment and Mizuho is not estopped from alleging infringement with respect to the spring loaded plunger element under the doctrine of equivalents. Id.

D. Literal Infringement

Finally, defendants contend that to the extent Mizuho alleges literal infringement of the '562 Patent, its claim must

be dismissed. To establish literal infringement, “each limitation set forth in a claim must be found in an accused product, exactly”. Duncan Parking Techs., Inc. v. IPS Group, Inc., 914 F.3d 1347, 1360 (Fed. Cir. 2019). Here, as discussed at length above, Mizuho admits that some elements are only present in the Accused Products under the doctrine of equivalents. Mizuho thus cannot maintain a claim of literal infringement of the `562 Patent.

To the extent defendants suggest, however, that Mizuho cannot argue that certain limitations of the `562 Patent were literally infringed, they are incorrect. That is not the law, and Mizuho is not so precluded. See Freedman Seating Co. v. Am. Seating Co., 420 F.3d 1350, 1358 (Fed. Cir. 2005) (explaining that an infringing product must contain “each limitation of the claim, either literally or by equivalent”); WiLAN, Inc. v. Apple Inc., 811 F.3d 455, 463 (Fed. Cir. 2016) (explaining that “[i]nfraction under the doctrine of equivalents requires the patentee to prove that the accused device contains an equivalent for each limitation not literally satisfied”).

ORDER

For the foregoing reasons, the motion of defendants Allen Medical Systems, Inc. and Hill-Rom, Inc. to dismiss is, to the extent plaintiff asserts a claim of literal infringement of United States patent number 9,713,562, **ALLOWED**, but otherwise, **DENIED**.

So ordered.

/s/ Nathaniel M. Gorton
Nathaniel M. Gorton
United States District Judge

Dated: July 6, 2022